

ENCLOSURE 2

TENNESSEE VALLEY AUTHORITY
WATTS BAR NUCLEAR PLANT (WBN)
UNIT 1

PROPOSED TECHNICAL SPECIFICATIONS

I. Marked-up Technical Specification/Bases Pages:

3.7-9	E2-2
3.7-9 Insert	E2-3
B 3.7-22	E2-4
B 3.7-23	E2-5
Bases Insert	E2-6

II. Revised Technical Specification/Bases Pages:

3.7-9	E2-7
B 3.7-22	E2-8
B 3.7-23	E2-9

3.7 PLANT SYSTEMS

3.7.4 Atmospheric Dump Valves (ADVs)

LCO 3.7.4 Four ADV lines shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3,
MODE 4 when steam generator is relied upon for heat removal.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. One required ADV line inoperable.</p> <p><i>Insert new Condition B (attached)</i></p>	<p>A.1 -----NOTE----- LCO 3.0.4 is not applicable. -----</p> <p>Restore required ADV line to OPERABLE status.</p>	7 days
<p><i>C</i> B. Two or more required ADV lines inoperable. <i>for reasons other than Condition B</i></p>	<p><i>C</i> B.1 Restore <i>all but</i> one ADV line to OPERABLE status.</p>	24 hours
<p><i>D</i> C. Required Action and associated Completion Time not met.</p>	<p><i>D</i> C.1 Be in MODE 3.</p> <p><u>AND</u></p> <p><i>D</i> C.2 Be in MODE 4 without reliance upon steam generator for heat removal.</p>	<p>6 hours</p> <p>18 hours</p>

3.7 PLANT SYSTEMS

3.7.4 Atmospheric Dump Valves (ADV)

LCO 3.7.4 Four ADV lines shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3,
MODE 4 when steam generator is relied upon for heat removal.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One required ADV line inoperable.	A.1 -----NOTE----- LCO 3.0.4 is not applicable. ----- Restore required ADV line to OPERABLE status.	7 days
B. One train (two ADV lines) inoperable due to one train of ACAS inoperable.	B.1 Restore ADV lines to OPERABLE status.	72 hours
C. Two or more required ADV lines inoperable for reasons other than Condition B.	C.1 Restore all but one ADV line to OPERABLE status.	24 hours
D. Required Action and associated Completion Time not met.	D.1 Be in MODE 3.	6 hours
	<u>AND</u> D.2 Be in MODE 4 without reliance upon steam generator for heat removal.	18 hours

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INSERT P 3.7-9

BASES

LCO
(continued) An ADV is considered OPERABLE when it is capable of providing controlled relief of the main steam flow and capable of fully opening and closing on demand.

APPLICABILITY In MODES 1, 2, and 3, and in MODE 4, when a steam generator is being relied upon for heat removal, the ADVs are required to be OPERABLE.

In MODE 5 or 6, an SGTR is not a credible event.

ACTIONS

A.1

With one required ADV line inoperable, action must be taken to restore OPERABLE status within 7 days. The 7 day Completion Time allows for the redundant capability afforded by the remaining OPERABLE ADV lines, a nonsafety grade backup in the Steam Dump System, and MSSVs. Required Action A.1 is modified by a Note indicating that LCO 3.0.4 does not apply.

Insert new B.1
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B.1 See Attached

C B.1

With two or more ADV lines inoperable, action must be taken to restore all but one ADV line to OPERABLE status. Since the block valve can be closed to isolate an ADV, some repairs may be possible with the unit at power. The 24 hour Completion Time is reasonable to repair inoperable ADV lines, based on the availability of the Steam Dump System and MSSVs, and the low probability of an event occurring during this period that would require the ADV lines.

D E.1 and E.2 *D*

If the ADV lines cannot be restored to OPERABLE status within the associated Completion Time, the plant must be placed in a MODE in which the LCO does not apply. To achieve this status, the plant must be placed in at least

(continued)

BASES

ACTIONS

D D
E.1 and E.2 (continued)

MODE 3 within 6 hours, and in MODE 4, without reliance upon steam generator for heat removal, within 18 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

SURVEILLANCE
REQUIREMENTS

SR 3.7.4.1

To perform a controlled cooldown of the RCS, the ADVs must be able to be opened either remotely or locally and throttled through their full range. This SR ensures that the ADVs are tested through a full control cycle at least once per fuel cycle. Performance of inservice testing or use of an ADV during a unit cooldown may satisfy this requirement. Operating experience has shown that these components usually pass the Surveillance when performed at the 18 month Frequency. The Frequency is acceptable from a reliability standpoint.

SR 3.7.4.2

The function of the block valve is to isolate a failed open ADV. Cycling the block valve both closed and open demonstrates its capability to perform this function. Performance of inservice testing or use of the block valve during unit cooldown may satisfy this requirement. Operating experience has shown that these components usually pass the Surveillance when performed at the 18 month Frequency. The Frequency is acceptable from a reliability standpoint.

REFERENCES

1. Watts Bar FSAR, Section 10.3, "Main Steam Supply System."
 2. Watts Bar FSAR, Section 15.0, "Accident Analysis."
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B.1

The four ADVs are supplied with safety-related Train A and Train B control air by the Auxiliary Control Air System (ACAS). Two valves receive Train A air and two valves receive Train B air. With one train (two ADV lines) inoperable due to an inoperable ACAS train, action must be taken to restore operability of the ACAS train to ensure operability of the ADV lines. The 72 hour Completion Time is reasonable since alternate means are available to operate the ADVs assuming an inoperable ACAS train, and the low probability of an event occurring during this period that would require the ADV lines. Normal control air is used to operate the valves, if available. In addition, the ADVs can be manually operated with the valve hand wheel, or by manually aligning a bottled nitrogen system to the valve operators. Each ADV is provided with a main and alternate nitrogen bottle designed to operate the valves if normal and emergency air supplies are lost. Further, the MSSVs will provide system over pressure protection if the ADVs fail to function, and the condenser steam dump valves will normally be available for plant cooldown.

3.7 PLANT SYSTEMS

3.7.4 Atmospheric Dump Valves (ADVs)

LCO 3.7.4 Four ADV lines shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3,
MODE 4 when steam generator is relied upon for heat removal.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One required ADV line inoperable.	A.1 -----NOTE----- LCO 3.0.4 is not applicable. ----- Restore required ADV line to OPERABLE status.	7 days
B. One train (two ADV lines) inoperable due to one train of ACAS inoperable.	B.1 Restore ADV lines to OPERABLE status.	72 hours
C. Two or more required ADV lines inoperable for reasons other than Condition B.	C.1 Restore all but one ADV line to OPERABLE status.	24 hours
D. Required Action and associated Completion Time not met.	D.1 Be in MODE 3. <u>AND</u> D.2 Be in MODE 4 without reliance upon steam generator for heat removal.	6 hours 18 hours

BASES

LCO
(continued) An ADV is considered OPERABLE when it is capable of providing controlled relief of the main steam flow and capable of fully opening and closing on demand.

APPLICABILITY In MODES 1, 2, and 3, and in MODE 4, when a steam generator is being relied upon for heat removal, the ADVs are required to be OPERABLE.

In MODE 5 or 6, an SGTR is not a credible event.

ACTIONS

A.1

With one required ADV line inoperable, action must be taken to restore OPERABLE status within 7 days. The 7 day Completion Time allows for the redundant capability afforded by the remaining OPERABLE ADV lines, a nonsafety grade backup in the Steam Dump System, and MSSVs. Required Action A.1 is modified by a Note indicating that LCO 3.0.4 does not apply.

B.1

The four ADVs are supplied with safety-related Train A and Train B control air by the Auxiliary Control Air System (ACAS). Two valves receive Train A air and two valves receive Train B air. With one train (two ADV lines) inoperable due to an inoperable ACAS train, action must be taken to restore operability of the ACAS train to ensure operability of the ADV lines. The 72 hour Completion Time is reasonable since alternate means are available to operate the ADVs assuming an inoperable ACAS train, and the low probability of an event occurring during this period that would require the ADV lines. Normal control air is used to operate the valves, if available. In addition, the ADVs can be manually operated with the valve hand wheel, or by manually aligning a bottled nitrogen system to the valve operators. Each ADV is provided with a main and alternate nitrogen bottle designed to operate the valves if normal and emergency air supplies are lost. Further, the MSSVs will provide system over pressure protection if the ADVs fail to function, and the condenser steam dump valves will normally be available for plant cooldown.

C.1

With two or more ADV lines inoperable, action must be taken to restore all but one ADV line to OPERABLE status. Since the block valve can be closed to isolate an ADV, some repairs may be possible with the unit at power. The 24 hour Completion Time is reasonable to repair inoperable ADV lines, based on the availability of the Steam Dump System and MSSVs, and the low probability of an event occurring during this period that would require the ADV lines.

(Continued)

BASES

ACTIONS
(continued)

D.1 and D.2

If the ADV lines cannot be restored to OPERABLE status within the associated Completion Time, the plant must be placed in a MODE in which the LCO does not apply. To achieve this status, the plant must be placed in at least MODE 3 within 6 hours, and in MODE 4, without reliance upon steam generator for heat removal, within 18 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

SURVEILLANCE
REQUIREMENTS

SR 3.7.4.1

To perform a controlled cooldown of the RCS, the ADVs must be able to be opened either remotely or locally and throttled through their full range. This SR ensures that the ADVs are tested through a full control cycle at least once per fuel cycle. Performance of inservice testing or use of an ADV during a unit cooldown may satisfy this requirement. Operating experience has shown that these components usually pass the Surveillance when performed at the 18 month Frequency. The Frequency is acceptable from a reliability standpoint.

SR 3.7.4.2

The function of the block valve is to isolate a failed open ADV. Cycling the block valve both closed and open demonstrates its capability to perform this function. Performance of inservice testing or use of the block valve during unit cooldown may satisfy this requirement. Operating experience has shown that these components usually pass the Surveillance when performed at the 18 month Frequency. The Frequency is acceptable from a reliability standpoint.

REFERENCES

1. Watts Bar FSAR, Section 10.3. "Main Steam Supply System."
 2. Watts Bar FSAR, Section 15.0. "Accident Analysis."
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